

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

By John Ferguson

Growing citrus trees continues to increase in popularity. We all know that citrus juice is good for us from both the pulp and fiber to the vitamin-C content.

A report in the magazine Life Extension (October 2022) gives additional evidence why it is good for us and the environment.

Several research studies (9) found that growing and eating the citrus called Moro Orange, has many health benefits. This fruit is high in beneficial chemicals called anthocyanins along with flavonoids, carotenoids, and hydroxycinnamic acids.

When overweight individuals consumed 400 mg or Moro orange juice extract daily for 12 weeks, they reduced their weight and belly fat by 4% compared to the control group. Similarly, a six-month trial found a 4.2% weight reduction.

I just learned of another reason to grow our own food or at least purchase from local farmers markets and it concerns climate change. A study from the University of Sydney, Australia has found that 6% of global greenhouse gas emissions is due to food transportation. Being a home vegetable gardeners can be part of the solution.

Homeowners can make a difference as there is a large amount of land in residential landscapes. This is over 484 million acres (280 times larger than Yellowstone National

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Park). Our decisions will determine the health of the food web, carbon sequestering, and much more in these millions of acres. Mother Earth News (October 2022)

Most of us are very concerned about the declining numbers of Monarch butterflies. Researchers at the University of Cincinnati have found several factors that affect their health.

Butterflies roosting near artificial light sources like those found on porches, garages, streetlights, etc. disrupts their circadian rhythms. Which then interferes with their navigational abilities.

Monarchs depend on the darkness of night time to process proteins that are essential to their internal compass. The light pollution also throws off their sense of time and hurts their navigational abilities.

Another joint study has been released by the CDC and several universities on the herbicide glyphosate. They found that over 80% of the children and adults in the USA now have this pesticide in their urine.

Studies at Florida Atlantic and Nova Southeastern Universities have found that glyphosate leads to convulsions in animals. They found that exposure at levels 300 time less than allowed, affects the nervous system. They found that this chemical alters hormones in humans that are the same, which affects sleep and mood in humans.



This also is important to gardeners, as round worms once exposed, convulse, and do not recover. Beneficial nematodes (round worms) help cycle nutrients for our plants and provide other services in the soil.

Other parts of the study found that chronic exposure and accumulation in our bodies may lead to Parkinson's disease. Scientific Reports 2022

A question I often get asked is "When if the best time to mulch my yard?" and the second question is "What is the best type of mulch to use?"

The first answer is "Anytime is better than not at all." However, let us look at nature, where fall is when almost all plants naturally get mulched. Hence, this is what plants want and prefer.

Mulches help control weeds, prevent diseases, conserve moisture, insulate the soil from extreme temperatures, enrich the soil with organic matter (carbon that feeds the soil food web), may provide valuable nutrients, and helps the garden look good.

A few years ago, in this newsletter I went through the pros and cons of over 20 different types of mulch. These reports can be found on our website.

The answer to the second question is "Depends on the application and what one is trying to do."

For example, many folks are putting in their fall vegetable garden. A well mulched garden can produce 50% more vegetable than one with out mulch. In general, a



composted (aged) native mulch made from the branches and limbs of shrubs and tree produces the highest quality mulch for most applications.

Properly made Native Mulch is full of beneficial microbes, loaded with nutrients, and a beautiful dark chocolate brown color. It is great for most shrub, trees, roses, most vegetables, and any fungal loving species. In most cases a four-inch-thick layer works best.

However, as some studies suggest, if one is growing members of the Cole family (Brussels sprouts, Cauliflower, Broccoli, etc.) that prefers and does better in bacteria dominated soil, then a grass clippings or hay mulch might work better.